FOSSpicks

Sparkling gems and new releases from the world of Free and Open Source Software

Hunting snarks is for amateurs – **Ben Everard** spends his time in the long grass, stalking the hottest, free-est Linux software around.

Web browser

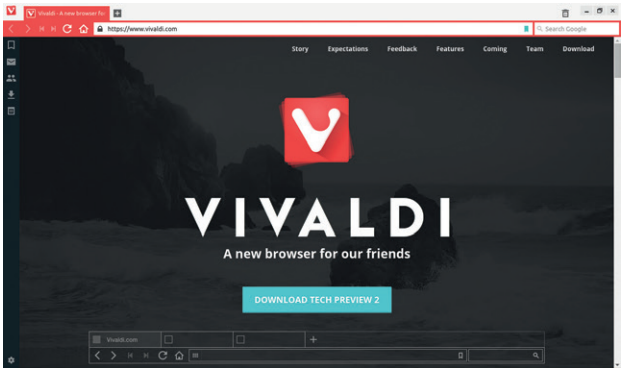
Vivaldi

There's a new project trying to muscle into the already crowded world of web browsers by appealing to power users. *Vivaldi* is a new browser built using the *Blink* rendering engine from *Chrome*, the Node.js back end, and the React.js rendering engine.

When you start *Vivaldi*, the most obvious thing about the browser is that it's clearly been designed to look good with Windows 8, so doesn't really fit in with any Linux desktop. There are big colourful areas with sharp corners rather than the smooth lines of the other popular browsers. Another slightly unusual aspect of the design is that the colour scheme of the browser changes to try and fit in with the currently displayed page.

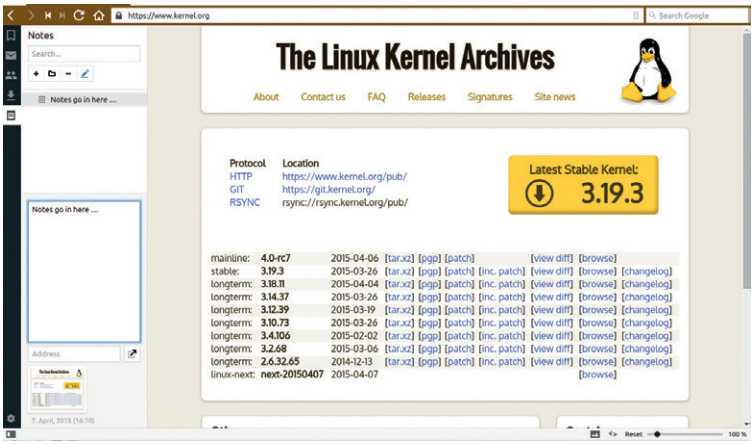
One of the goals of the *Vivaldi* project is to be the fastest web browser on the planet. This seems an ambitious goal given how much time and effort the other browser development teams have spent on optimising their software. In our tests, we found that currently, *Firefox* (the fastest of the popular browsers) was 36% faster than *Vivaldi* in the Sunspider test. Given that this is still a technical preview we're looking at, we can't really fault *Vivaldi* for not yet being the fastest, but the *Vivaldi* team have their work cut out if they're to catch up with the others. This is especially true since the browser is built on JavaScript, which – while it is far faster than it used to be –it isn't the swiftest language.

As well as speed, *Vivaldi* is aiming for power-user features. The biggest of these are notes and tab stacks. Both of these will benefit people who do a lot of research on the web. Notes enable you to store bits of text and a screenshot linked to a website. Currently you're limited to one screenshot per note, which seems a little arbitrary and limits the usefulness of the feature. Tab stacks is the ability to bring tabs together to form two layers of tabs. In theory, it's a good way of de-cluttering your tab bar, especially if you're the sort of person that has too many tabs open for them all to fit on the screen at once. In practice, we found it fiddly to use.



The overall aesthetic won't fit in with most Linux desktop themes, but it does have a certain modernity that will appeal to some.

> **"One of the goals of the Vivaldi project is to be the fastest web browser on the planet."**



The ability to make notes is our favourite feature in the current version, as it makes research on the web much more pleasant than just using bookmarks.

We like the ideas behind Vivaldi, particularly the notes. If you're a web power user, it's worth checking out. However, unless it can also deliver on its aim to be the fastest browser, they could be better delivered through browser extensions or addons than by a whole new browser.

If it can deliver on its promises, *Vivaldi* will pose a serious challenge to the established players, but it still has a long way to go.

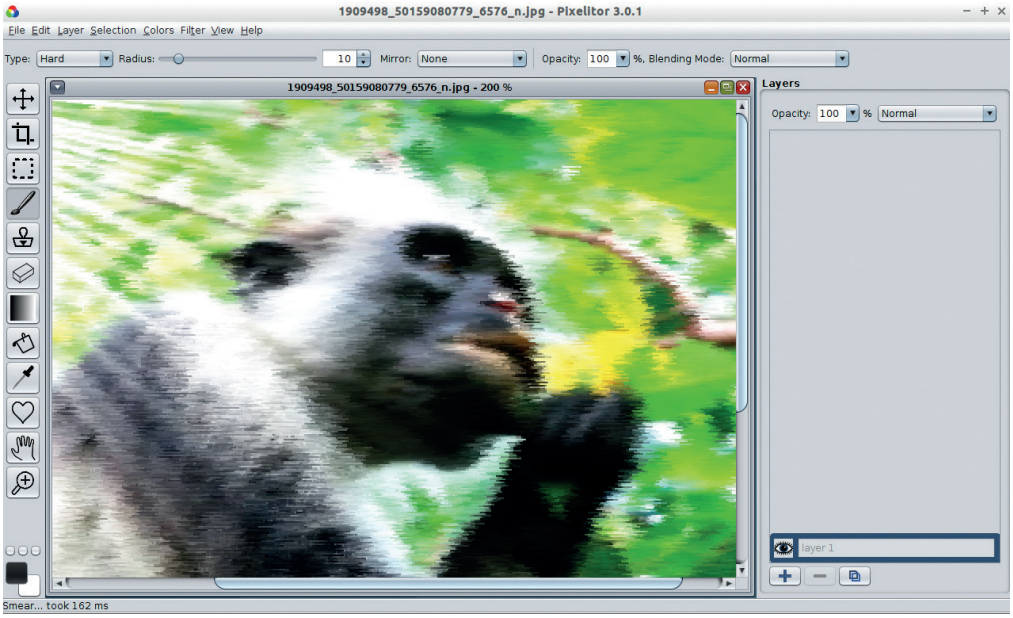
PROJECT WEBSITE
www.vivaldi.com

Image editor

Pixelitor 3

Pixelitor supports all the usual things you'd expect to find in an image editor. You can draw, add layers and crop, but by far the best feature is the range of filters it comes with.

If you're looking for a tool to touch up your photographs, you'll probably be better off with a proper photography tool such as *Fotoxx* (which we look at later in FOSSPicks). *Pixelitor* filters are better at manipulating images (which could be photos) in more creative ways. Take a look at the two images we've created. They both started with the same image of monkey, but the end results are very different.


1909498_50159080779_6576_n.jpg - Pixelitor 3.0.1
File Edit Layer Selection Colors Filter View Help
Layers
Smear... took 162 ms

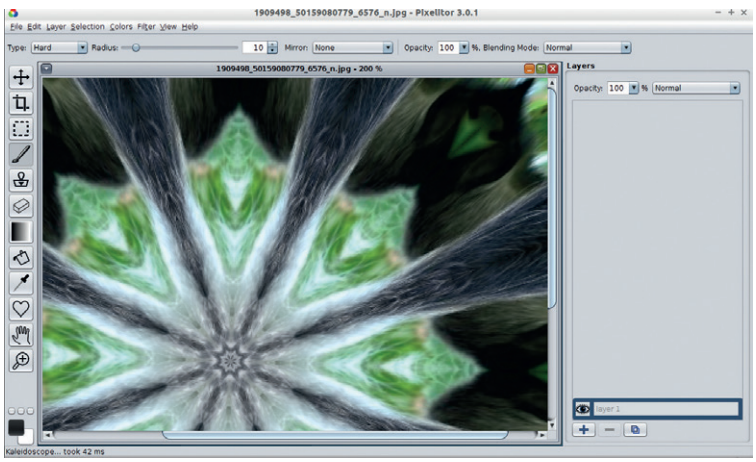
The endangered Zanzibar red colobus monkey lives only on the island of Unguja on the Zanzibar archipelago, and is a surprisingly tolerant and patient subject for photography.

Most of the filters interact with the current image, but some of them create new images – these are the ones under the Render sub-menu. With these you can create wood, clouds, plasma and other types of images. These can go in different layers to the main image, and this enables you to create new backgrounds to present an image on.

We found *Pixelitor* a great alternative to *Gimp* when we just wanted to play around with a few effects. *Pixelitor* makes this quicker and easier, but it doesn't have the depth of features that the venerable old program has. *Pixelitor* also doesn't make it easy to add new effects, as there's no plugin architecture, so you either have to make do with the effects that come with the software, or dive straight into the main codebase to add new ones. Fortunately, there are quite a lot (over 80) by default, but if you have esoteric needs, you may need to use some other software.

There isn't any documentation, so if you're not familiar with the terminology of image manipulation, this may not be the best tool to start with. However, the software is clearly laid out and the dialogs are easy to use, so despite the lack of help files, it's fairly straightforward to get started if you're broadly familiar with the area.

"Pixelitor is a great alternative to Gimp when you just want to play around with a few effects."



The kaleidoscope effect is one of the more creative options, and the end result is far removed from the initial image.

Pixelitor needs Java 8, which isn't installed in all distributions by default. The fact that it runs on Java does mean that *Pixelitor* is easy to install. Just download the file from the project website, and run it with:

```
java -jar pixelitor_3.0.0.jar
```

This should work on just about any OS (Linux-based or not) that has Java 8 installed. This has the added advantage of meaning you can use it as a portable application. Just keep the JAR file on a USB stick, and you should be able to run it on any computer you need to use (again, provided it has Java), which is great because you never know when you need to add a little creativity to an image.

PROJECT WEBSITE
http://pixelitor.sourceforge.net

Filesystem explorer

Eagle Mode

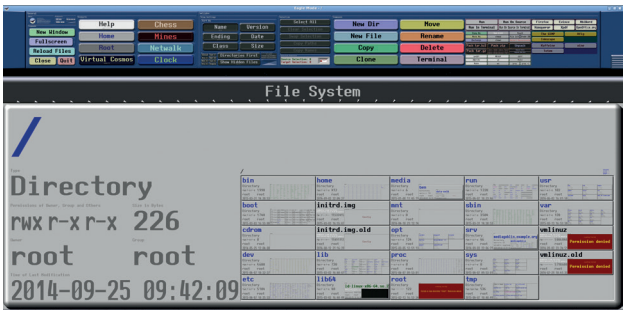
Have you ever wondered what it would be like if your filesystem were a landscape and you were an eagle flying above it able to swoop down for a closer look at any area? No? Well you should! That's what *Eagle Mode* does, and it's a quirky, if not always useful, alternative to traditional file managers.

You begin by soaring above your filesystem, only able to see your root folder (there are also some applications scattered around the edge of this folder that you can drop down to). As you descend, you can make out more and more detail. What first appeared as a single rectangle for the root folder, you now see is sub-divided into sections for its contents. If you descend into any one of these, you see that they too are divided up into their contents.

The only ground in this virtual world is the files. These aren't divided up, but as you descend towards them, the amount of detail grows until you realise that you can view the contents of the file, whether it's an image, text or data.

There's a menu bar with options for all the usual file manager commands, so you can use it for all your normal admin duties should you wish, but it's probably better suited to filesystem exploration and idle curiosity than any serious work.

The graphics are rendered in OpenGL, so provided you have a powerful enough computer (it's not very demanding), everything runs smoothly, and we didn't notice and stuttering. Control is via the mouse, and it's perfectly intuitive. You use the scroll wheel to move down or up, and click and drag to move around. There's a user guide next to the filesystem that you can descend into if you want a little more guidance on how to use it, but really the best way to enjoy *Eagle Mode* is to dive in and see what you can see. Now fly and be free!



Eagle Mode: the most fun you can have with a file manager. But why didn't Gandalf just summon the eagles in the first place?

"Eagle Mode is a quirky alternative to traditional file managers."

PROJECT WEBSITE
http://eaglemode.sourceforge.net

Letters animator

Durdraw

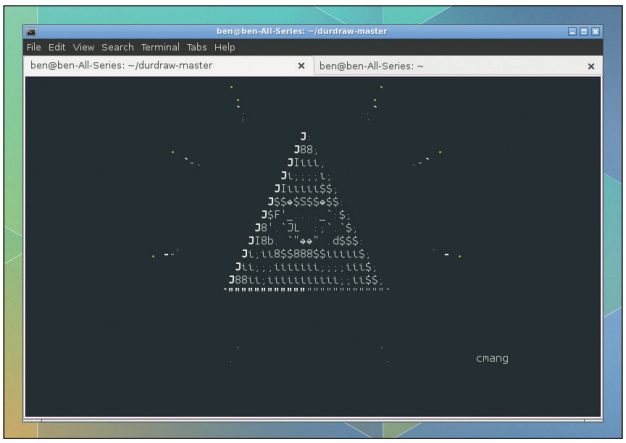
Years ago, before Gnome, before KDE and before even Linux itself, if you needed an image on your computer, you made it out of text. Carefully placed letters (in a monospaced font of course) can make up images of almost any complexity. These images of text spawned their own art form called ASCII art. They were distributed on bulletin boards around the world long before Tim Berners Lee had even heard the word hypertext, let alone thought of building a world-spanning web of it.

ASCII art may not be as popular as it once was, but even with 4K monitors and high-performance 3D accelerators, it's not dead yet. For true aficionados, these technologies just mean that you can render fonts better. There's some character in these low-fi images that no amount of realism will ever be able to match.

Durdraw is a project to breathe life into static ASCII art by helping the artist animate the picture. This is done by editing the file frame by frame and having a playback function so you can watch your creations in glorious technicolour.

Durdraw is a Python script, so there's no need for any complicated installation; just download the Zip file from GitHub and run it. There are a few examples to get you started, and you can also view these on the project website without installing to get a better idea of the possibilities.

"Durdraw is a project to breathe life into static ASCII art."



Animate like it's 1989!

Once you've created your work, you can save it in *Durdraw*'s DUR format. However, this is only playable by people with *Durdraw* installed. For the rest of the world, you can export as an animated GIF. That might take away some of the magic, but it's far more compatible with other software.

PROJECT WEBSITE
http://cmang.org/durdraw

Information organiser

TreeLine

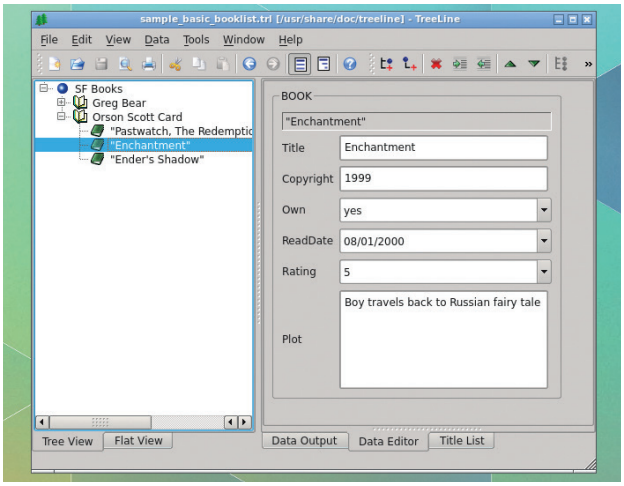
Remember when we were promised paperless offices? We can't say what yours is like, but Linux Voice Towers is awash with notes hastily scribbled down, and all manner of paper-based communications. If anything, it feels like each new year brings more paper-based notes, not fewer.

TreeLine is a hard to categorise, but broadly speaking its aim is to reduce the number of notes you have written down by providing another way of storing information digitally that is intuitive for some forms of data. Its basic purpose is information organisation, but that makes it sound a bit like a database or a spreadsheet (it's nothing like these). It's based on the idea that information is fundamentally hierarchical, and stores data in the form of a tree (this is the same structure as the Linux filesystem, except instead of directories and files, it has nodes that can hold formatted information).

The example given in the documentation highlights this well: it stores information about a set of books. The first (or root) node just says that it's a collection of books. Inside this there are nodes for books you've read and unread books. Inside these are nodes for each author, and inside these are nodes for each book.

Nodes have a type, and each type corresponds to a particular set of information. For example a book could have a title, publication date, rating, outline and other information. You can create custom data types so that they fit with the information you want to store.

"TreeLine's basic purpose is information organisation."



Is the paperless office finally here? Probably not, but *TreeLine* is another way of helping yourself remember things.

Getting *TreeLine* to work well for you depends on finding a good hierarchy and a good set of data types. If you do this, you can quickly have an easy-to-use information store, and maybe you'll end up with a bit less paper on your desk.

PROJECT WEBSITE
http://treeline.bellz.org

Text Editor

Nano

Development happens slowly with stable products, and version 2.4 of the *Nano* text editor has just come out four years after the 2.3 release. The new release – named 'lizf' – brings one major update: the new undo system. This should make editing a little less error prone for ham-fisted typers (like those of us at Linux Voice). Undo is done with Meta+U, and works just as it does on most other editors. This alone is enough to convince us that the update is worth it, and now we're wondering how we managed to use *Nano* for so long without this feature.

As well as this, there are a bunch of smaller improvements, such as a new linter system and syntax highlighting, and of course, the new version also brings in a host of bugfixes.

Nano is hugely popular for a few reasons, but perhaps most importantly, it's available in just about every Linux system installed in the last decade. This means that if you're working on a server that you don't have install permissions on, you can almost guarantee that *Nano* will be there.

Simples

It's also easy to use, and all the important shortcuts are displayed on screen, so you don't have to remember anything. This is useful for people who only use command line text-editors infrequently and don't want to have to remember huge numbers of arcane keystrokes to perform basic tasks.

While it doesn't have a huge rage of features, the simplicity and ubiquity of *Nano* makes it the editor of choice for many Linux users. It's usually the terminal-based text editor of choice for anyone who doesn't use Vim as their main editor. The new version is unlikely to convince any *Vim* users to switch over, but it's nice to see it still getting updates after all this time.

Other text editors may have more features, but *Nano* is always available, and that's just as important.

PROJECT WEBSITE
www.nano-editor.org

Session detacher

Abduco

Abduco is a tool that enables you to run programs separately from the terminal that spawned them. In its simplest usage, you create a new session by using the **-c** flag and specifying a name for the new session, and the application you want to run with:

```
abduco -c <session name> <application name>
```

You can create as many sessions as you like provided you give each of them a distinct session name.

To detach from the session (but leave the software running), hit Ctrl+\. One of the biggest advantages of this is that, when connecting to a remote computer over SSH or similar protocol, if you log off the remote computer, the detached session will continue to run rather than terminating all the running software from that session.

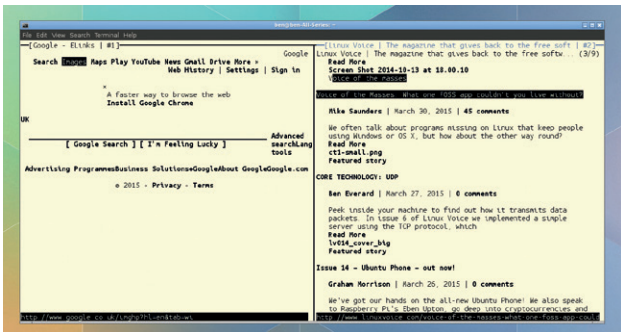
To rejoin a running session use:

```
abduco -a <session name>
```

There are a few more options (take a look at the README file for more details), but that's most of the functionality. *Abduco* is a bit like a really stripped-down version of *Tmux* or *Screen*. This means that it's easy to pair it up with other software to build your own customised terminal multiplexer. If you leave the application name blank when starting a new session, *Abduco* will try to launch *DVTM* (a tiling window manager for the terminal), and create a system that's quite similar to *Tmux*. However, you could pair it up with other bits of software, or tie it together in different ways. This provides far more flexibility than an all-in-one solution.

"Abduco is like a really stripped-down version of Tmux or Screen."

When you pair *Abduco* with *DVTM*, you get a powerful terminal multiplexer. However, by using them separately, you can have just the features you want, and not have to bog your system down with unnecessary bloat.



In a pinch, you can use a session detacher like Abduco (or Tmux or Screen) to run a server, but you should use your distro's server tools (init or systemd) if you plan to use the server for a long time.

PROJECT WEBSITE
www.brain-dump.org/projects/abduco

Image organiser

Fotoxx

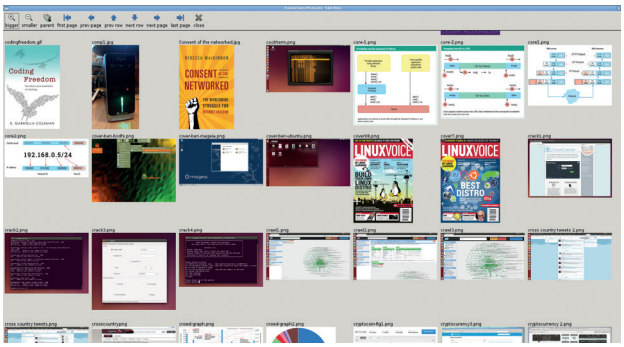
We've called *Fotoxx* an image organiser, but it's actually far more than this. It's an all-round photography tool. It can manage your images and perform a wide variety of manipulations on them. Most of these manipulations are of the 'digital darkroom' type designed to improve the quality of your pictures, for example, such as adjusting contrast, brightness, or warping.

Some of the manipulations go beyond traditional darkroom processing, such as making high dynamic range images. This takes a set of images of the same scene with differing brightness levels and combine them together so that the whole scene is correctly lit. A similar manipulation can be done with images with different focal points to make an image that is sharp through all depths. Some of the more artistic photographers may feel that this is a step too far in the world of image manipulation, but we just like pretty pictures.

If you've got a large number of images that need adjusting in the same way, the batch-processing options in *Fotoxx* can save a lot of time, though it is quite limited. Experienced command line users may prefer CLI tools such as *ImageMagick* instead.

Gentlemen take polaroids

Fotoxx may struggle with high-end use, but it's capable enough for most amateur photographers. It can read almost every image type (including RAW), so should have no problem dealing with existing image libraries from just about any camera.



As well as managing photos, we've been using *Fotoxx* to keep track of our huge collection of screenshots.

The software may lack detailed documentation, but the examples on the website should be enough to get most people started. They highlight the different features, and it's not too difficult to work out how to perform the actions in the software if you're fairly familiar with image tools.

PROJECT WEBSITE
www.kornelix.com/fotoxx.html

FOSSPICKS Brain Relaxers

Puzzle game

KNetWalk

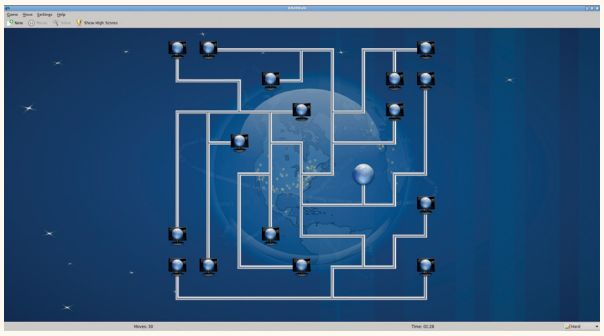
Netwalk is a game in which you have a grid of network components. These components could be cables, computers or servers. They connect in different ways, and you can rotate the squares in the grid. The aim of the game is to connect all the computers to the server using all the cables.

It's a simple idea, but it can be quite challenging – kind of like how a computer game based on the problem of untangling cables should be. Each part of the solution can, in some way, affect any other part. On smaller boards, it's usually quite straightforward to see how the servers have to be linked. However as the boards get bigger and hold more servers, it becomes a challenge to find routes to the servers that don't cut off routes to other servers

There are quite a few different versions. We've looked at *KNetWalk*, but there's also a version included with *Eagle Mode* (reviewed earlier in FOSSpicks), and there's a web-based version at **www.logicgamesonline.com/netwalk**.

Bite-size challenge

There are a range of difficulties, which are determined by the size of the board, and the game is scored by time. The quicker you can solve large boards, the better a player you are. In *KNetWalk*, the grid cables can connect between opposite sides of the board if you're playing on very hard mode, though this isn't possible in all versions.



Pro tip: if you ever create a real network that looks like this, you've done something wrong.

If you're struggling to advance to the more difficult stages, there are some tips in the help files. Once you've worked out the best technique, you should be able to conquer most levels in a few minutes. This makes *KNetWalk* perfect for filling a few minutes while you're waiting for something to download.

PROJECT WEBSITE
https://games.kde.org/game.php?game=knetwalk

First-person shooter

Xonotic

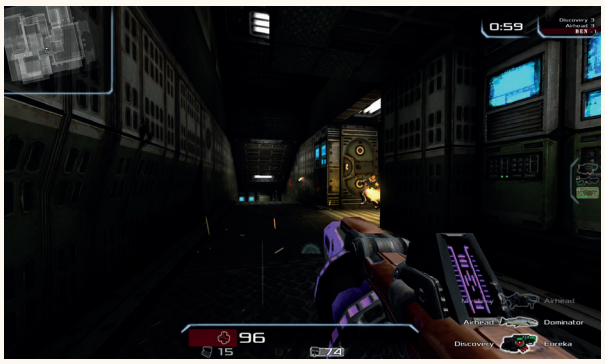
Broadly speaking, the aim of a first-person shooter game is to run around and kill people. In *Xonotic*, this involves using futuristic weapons, and plenty of jumping to get around the levels.

Xonotic has most of the usual FPS gameplay options, including capture the flag and death match, and has single-player (against AI opponents), and multi-player options. The best games are to be found in the networked multiplayer version. *Xonotic* is popular enough that there are always games going on that you can join in and start fragging people around the world. If you fancy yourself as a true *Xonotic* warrior, there are tournaments where you can pit your skills against the best players in a battle to the death.

Xonotic is a fork of *Nexuiz*, which was an open source game, but went commercial. However, the commercial version has been discontinued and the server's taken offline. The spirit of *Nexuiz* lives on in *Xonotic*.

Xonotic is based on the *DarkPlaces* engine, which is itself based on the *Quake* engine. This long heritage produces a game that is visually impressive. In fact, it is – to our eyes – the best looking open source FPS game, despite which it should play well on computers with even quite modest 3D capabilities.

"Xonotic is a fork – the spirit of Nexuiz lives on in Xonotic."



Linux gaming isn't all about steam: there are plenty of great open source games, as *Xonotic* proves.

The new version includes new sounds, new maps, a tidier user interface, and many more minor improvements. If you already have the older version, it's well worth upgrading.

PROJECT WEBSITE
http://xonotic.org